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AUTHOR Corno, Lyn
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ABSTRACT

This paper describes recent research on causal attribution (ways people construe the events in their lives) and how knowledge of this psychological phenomena can be used to aid students in developing attributional processes that will enhance motivational factors and have positive effects on academic achievement. Four specific suggestions are made with this goal in mind for development of a curriculum: (1) Instructional activities should be constructed to emphasize the role of effort in successful performance; (2) Students should be helped to make accurate attributions by attending to potential areas of "misattribution"; (3) Instructional environments should minimize the threat of failure; (4) Students should be informed of their progress in instruction as it relates to their past performance and the performance of their peers. (JD)

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Implications of Research on Causal Attributions for Curriculum Development

Lyn Corno

Stanford University

School of Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Implications of Research on Causal Attributions for Curriculum Development

In recent years, psychology has focussed increasingly on cognitive processes and their influence on behavior (Bandura, in press; Mischel, 1973). One result of this focus is that motivational theories have been reconceptualized in informational processing terms (Bandura, 1977; in press; Weiner, 1972). Among the cognitive conceptions of motivation is a theory about causal attributions--namely Attribution Theory--which has prompted considerable research. Much of this research, fortuitously, has been conducted with students in achievement-related situations. The results have rich implications for educational practice. But theories about attributional processes, or ways people construe the events in their lives, are young and complex. Where guiding principles for practice are discernable, they must be considered experimental. Thus researchers have been hesitant to propose specific procedures for dealing with attributional processes in the classroom. As a consequence, present curriculum practices remain largely inattentive to student attributional processes.

This paper has three aims: (a) to describe a body of recent social psychological research--research on causal attributions--and discuss its relevance to education, (b) to argue that explicit attention to attributional processes in schools requires (at least initially) a systematic and controlled approach of the kind best provided by professional curriculum developers, and (c) to provide specific suggestions for curriculum development based on key research results. It is hoped that application of these techniques in early education programs will aid students to develop attributional processes that enhance motivational factors and eventually have positive effects on academic achievement.

Attribution Theory: The Promise for Education

In simple form, the theory of causal attributions as related to education postulates the existence of two perceived determinants of achievement outcomes: internal attributions (or attributions to the self, e.g., when a student says "I did well because I knew the material") and external attributions (or attributions to the environment, e.g., when a student says "I did well because the test was easy"). The internal attributions are further divided into dimensions of "can" ("I have the ability") and "try" ("I made an effort") (Heider, 1958). In general, the education-related research of Weiner (1972) has shown the two internal dimensions to relate consistently to achievement motivation (as operationalized by Atkinson, 1964). More specific results indicate the following:

1. When students are given information about their past performance, the performance of fellow students, and the difficulty of the task, they are more likely to make "accurate" achievement attributions.
2. Achievement attributions can be manipulated experimentally.
3. Individuals vary greatly in the amount and kind of information they use to make achievement attributions.
4. Persons high in achievement motivation are particularly sensitive to information indicating the importance of effort and have learned to attribute achievement outcomes to effort.
5. Causal attributions influence the direction, magnitude, and persistence of achievement-related behavior.

For the most part, these results are substantiated by sound methodology, the strengths of successive experimentation (Corno, 1976), and the related findings of other researchers (see Bandura, in press; Rotter, 1966). But what meaning have they for educational practice? If causal attributions

are strong enough to influence the direction, magnitude, and persistence of achievement-related behavior in school children, they should be attended to by teachers and parents. Increasing the accuracy of students' achievement attributions might also have positive effects on other motivational aptitudes, such as self-concept and anxiety level, for example. Alternatively, if students are left to make inaccurate or uninformed attributions (as in the case of a student who attributes failure to a lack of ability, when in fact the test was unfair) low self-confidence or greater anxiety may result. Thus Katz (1967) has found evidence that young black children frequently fail to learn the value of effort on tasks--a problem that may be due to inadequate reinforcement patterns in the home and school (p. 163). As such, the problem should not be limited to black students, but should apply to students with less stimulating home and school environments, in general. Accordingly, attributional change procedures may be of special concern in early education programs for low socio-economic areas. If informed attributions, particularly attributions to effort, can be strengthened in children at early stages of development, problems of motivation and academic achievement may be lessened later on.

A further research finding, that causal attributions can be manipulated experimentally, suggests the possibility that attributional processes are trainable; this in turn suggests that variations across students in information they use to make causal attributions should be reducible. If information use is more homogeneous, attributions should be consistently more accurate. And finally, if students with low achievement motivation or low self-efficacy can be systematically sensitized to the importance of effort, and learn to make achievement attributions to effort, it is conceivable that achievement motviation and self-efficacy could increase in these students over time--a proposition that has been supported to some degree by previous research (see Bandura, in press; deCharms, 1972).

Specific Suggestions for Curriculum Development

The application of psychological principles to educational practice is a complex and sensitive area. Outcomes are always multidimensional, and procedures often demand controlled conditions to achieve expected results. To trust the initial efforts at training students in attributional awareness to parents and teachers, where instructional environments and possible outcomes inevitably vary, then, is risky practice. A more promising method, at least in the early stages of such an effort, would be to incorporate specific attributional change processes into standardized instructional programs. In this context, the proposed processes can be applied and evaluated in systematic fashion with representative populations of students. The remainder of this paper presents preliminary suggestions to curriculum developers for incorporating attributional change techniques in systematic instructional programs.

1. Instructional activities should be constructed to emphasize the role of effort in successful performance.

   The research on informational cues for causal attributions used two methods for emphasizing ability and effort differentially: past performance patterns and direct verbal instructions. Translated into classroom procedures, these two methods might refer to instructional feedback, grading practices, and directions for completing instructional activities. Thus, to emphasize effort in an instructional activity, a number of options may be useful:

   - Directions for completing the lesson might include statements for students such as "try as hard as you can," or "think carefully before answering," or "you will be evaluated as much by how hard you try as by how well you do."
   - Instructional materials might include stories about characters or incidents that illustrate the value of effort, e.g., "the myth of

Sisyphus," or simplified stories of Don Quixote.

. Evaluations of student performance might include specific comments about how to improve by applying concerted effort in particular problem areas.

. Students displaying effort in instructional situations could be singled out, reinforced, and asked to share their reasoning about their efforts with the whole class. This "modeling" technique should prove especially effective if students chosen as models are diverse in background and other personal characteristics (Bandura, in press, p. 13). Furthermore, such an approach could be developed into comparative discussions of individual students' "implicit theories" about what makes people successful (e.g., Is Jimmy Carter President because he is ambitious, kind, etc.?).

2. Students should be helped to make accurate attributions by attending to potential areas of "misattribution" (Kelley, 1967).

. Students can be sensitized to their attributions simply by requests to evaluate their own performance. The student who misattributes failure, for example, to a lack of ability can be shown that a lack of effort, instead, was the problem. Cues such as not reading the material carefully enough, or at all, would indicate a lack of effort. Similarly, failure may have been determined in part by anxiety. When signs of anxiety are pinpointed and soothing techniques are applied, the student may be able to see more positive results. These techniques could be built into teachers' manuals, especially in activities that stand to benefit from increased effort and concentration.

. When consensus exists among curriculum developers that some activities are more difficult than others, this information should

be provided with program materials. Knowledge about task difficulty can often be used as partial justification for initial failure, rather than permitting the failure to reflect back on the student's self-worth.

. Attributions are often made incorrectly when views of authorities are accepted uncritically. A student may believe, for example, that he is not trying or not able simply because a teacher says so. Instructional programs designed to develop critical thinking and increased self-awareness may be useful in minimizing potential misattributions by encouraging questioning and independent thinking.

3. Instructional environments should minimize the threat of failure. Apart from the usual concern that instruction progress logically and conclude with a synthesis, research has shown that when students are encouraged to generate alternative ideas, weigh expected consequences, and do creative work on their own, the threat of failure is reduced and students are more likely to have positive attitudes toward academic tasks (DeCharms, 1968, p. 346). Further, specific self-instructions have been found to sustain work persistence in academic situations (Meichenbaum and Cameron, 1974). In both of these cases, the reinforcement may be said to occur from within the person himself; the focus of the instruction, accordingly, is on the individual's self-evaluation of performance, rather than the performance itself. As Bandura (in press) has noted, the more extensive the situational aids for performance, the greater the chance that results will be attributed to external factors (p. 21). It follows, then, that situational aids should be minimized, or systematically reduced, when internal attributions are a goal.

. To accomplish these outcomes, instruction that incorporates

teacher questions, or questions in text, is favorable. Such questions require application and evaluation, permitting a range of "correct" answers. Furthermore, when activities require the student to work on his own ideas at his own pace, and grading is criterion-based, the threat of failure is reduced and opportunities to benefit from success are increased.

. Another technique for improving the learning situation might be to provide specific instructions for the student to repeat to himself when anxiety or other distractions arise. For example, students can be taught to verbalize calming statements to themselves ("Don't worry. Worrying won't help anything."), or statements to aid in resisting temptations leading to inattention ("I only have ten minutes. I can't waste time on any one answer."). Again, the result should be a decrease in the fear of failure (Meichenbaum and Cameron, 1974).

4. Students should be informed of their progress in instruction as it relates to their past performance, and the performance of their peers.

. Both criterion-referenced and norm-referenced progress information can be important vehicles for increasing accuracy in attributions, especially if students are able to see results of their efforts over time, and their performance in relationship to the performance of others as well. Both types of feedback can be provided in instructional programs, and, when it is provided in graphic form, students will be able to see results over time.

These four principles and the spceific suggestions within them provide a preliminary starting point for the development of accurate, informed attributional processes in school children. This, to "restore the instrumental value to competencies [the children] possess" (Bandura, in press, p. 28).

The recommended medium for providing such training is systematic instructional material capable of creating fairly standard learning environments across a range of subject matter and developmental levels. Suggestions derive from psychological research on attributional processes as related to achievement outcomes. Explicitly described, the research findings have obvious relevance to educational practice. It is unfortunate, but not unalterable, that few of these findings have been tested in educational settings. The aim of this paper was to create a confluence for these two rivers of thought.

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